

Outfall 002A – TCE Exceedance in February 2017 and Plan of Action

The TCE concentration in the sample from outfall 002A (groundwater infiltration) was 43 ppb this month, compared to a permit limit of 5 ppb.

Sample collection was unable to be performed under dry weather conditions, as required by the permit, due to frequent precipitation events and subsequent snowmelt (temperature and/or salt induced melt) during the month of February. Under dry weather conditions all groundwater infiltration into the storm system is typically collected and treated in the GWTP before reaching Outfall 002a. On the day of sampling this month, snow melt was occurring which in combination with very high water table conditions, resulted in a dry weather flow that exceeded the dry weather capture system flow rate (40 gpm) at the time of sample collection.

The reasons for this conclusion are as follows:

1. The vault transfer pumps were engaged during sample collection and were pumping at approximately 40 gpm throughout the sampling period and the flow measured at 002A was 113 gpm, compared to 83 gpm at 002B. Also, the float switch just downgradient of the retaining baffle in CB-87R was engaged indicating that excess flow was going over the baffle at the 40 gpm capture rate.

The following corrective actions were performed and/or are planned:

1. This month (March 2017) we are going to attempt to seal two open bottom catch basins (CB-74 and CB-73) as an immediate corrective action effort to reduce the amount of dry weather flow entering into the storm sewer system during these seasonally high water table conditions. As of 3/15/17, the interiors of both CB-73 and 74 have been power-washed and mortar has been applied to the interior to seal the seams at the inverts and in between the blocks. The bottom seal of CB-74 has also been poured and initial curing results indicate a near water-tight seal. The bottom of CB-73 is scheduled to be poured on 3/17/17 at which time CB-74 will be further evaluated and, if necessary, supplemental sealing efforts will be made.
2. We are continuing to increase the recovery capacity of the overburden system and have been operating a second transfer pump to work in tandem with the existing transfer pump for approximately 1 month with good results. This is being done in an effort to reduce the amount of overburden infiltration into the storm sewer which will thus reduce the dry weather flow and allow us to maintain dry conditions on the downstream side of the baffle at a 40 gpm pumping rate. We have been incrementally increasing the vacuum on the overburden header piping (to prevent surging) and over the past month have seen an increase of approximately 20 gpm. Continued balancing efforts of the overburden capture system are also being performed in order to increase capture at the points closest to the storm sewer network.

Note: Operating the dry weather flow capture system at a flow rate greater than 40 gpm greatly increases the risk of total system shutdown due to fouling from organics (leaves, twigs, etc.) and bacterial iron sludge. For this reason our corrective action is focused on reducing the amount of

overburden groundwater that infiltrates into the storm sewer as this will result in a long-term solution for a recurring problem during high groundwater conditions.